About the dataset

Stack Overflow, a popular website for developers, conducted an online survey of software professionals across the world. The survey data was later open sourced by Stack Overflow. The actual data set has around 90,000 responses.

The dataset you are going to use in this assignment comes from the following source: https://stackoverflow.blog/2019/04/09/the-2019-stack-overflow-developer-survey-results-are-in/ under a **ODbL: Open Database License**.

You will be given a subset of the original data set in this capstone project. You will explore, analyze, and visualize this dataset and present your analysis.

Note: This randomised subset contains around 1/10th of the original data set. Any conclusions you draw after analyzing this subset may not reflect the real world scenario.

The dataset is available as a .csv file here.

The below table lists the questions asked in the survey and the column under which the response was collected.

Column Name	Question Text
Respondent	Randomized respondent ID number (not in order of survey response time)
MainBranch	Which of the following options best describes you today? Here, by "developer" we mean "someone who writes code."
Hobbyist	Do you code as a hobby?
OpenSourcer	How often do you contribute to open source?
OpenSource	How do you feel about the quality of open source software (OSS)?
Employment	Which of the following best describes your current employment status?
Country	In which country do you currently reside?
Student	Are you currently enrolled in a formal, degree-granting college or university program?
EdLevel	Which of the following best describes the highest level of formal education that you've completed?
UndergradMajor	What was your main or most important field of study?
EduOther	Which of the following types of non-degree education have you used or participated in? Please select all that apply.
OrgSize	Approximately how many people are employed by the company or organization you work for?
DevType	Which of the following describe you? Please select all that apply.
YearsCode	Including any education, how many years have you been coding?
Age1stCode	At what age did you write your first line of code or program? (E.g., webpage, Hello World, Scratch project)
YearsCodePro	How many years have you coded professionally (as a part of your work)?
CareerSat	Overall, how satisfied are you with your career thus far?
JobSat	How satisfied are you with your current job? (If you work multiple jobs, answer for the one you spend the most hours on.)
MgrIdiot	How confident are you that your manager knows what they're doing?

Column Name	Question Text
MgrMoney	Do you believe that you need to be a manager to make more money?
MgrWant	Do you want to become a manager yourself in the future?
JobSeek	Which of the following best describes your current job-seeking status?
LastHireDate	When was the last time that you took a job with a new employer?
LastInt	In your most recent successful job interview (resulting in a job offer), you were asked to... (check all that apply)
FizzBuzz	Have you ever been asked to solve FizzBuzz in an interview?
JobFactors	Imagine that you are deciding between two job offers with the same compensation, benefits, and location. Of the following factors, which 3 are MOST important to you?
ResumeUpdate	Think back to the last time you updated your resumé, CV, or an online profile on a job site. What is the PRIMARY reason that you did so?
CurrencySymbol	Which currency do you use day-to-day? If your answer is complicated, please pick the one you're most comfortable estimating in.
CurrencyDesc	Which currency do you use day-to-day? If your answer is complicated, please pick the one you're most comfortable estimating in.
CompTotal	What is your current total compensation (salary, bonuses, and perks, before taxes and deductions), in `CurrencySymbol`? Please enter a whole number in the box below, without any punctuation. If you are paid hourly, please estimate an equivalent weekly, monthly, or yearly salary. If you prefer not to answer, please leave the box empty.
CompFreq	Is that compensation weekly, monthly, or yearly?
ConvertedComp	Salary converted to annual USD salaries using the exchange rate on 2019-02-01, assuming 12 working months and 50 working weeks.
WorkWeekHrs	On average, how many hours per week do you work?
WorkPlan	How structured or planned is your work?
WorkChallenge	Of these options, what are your greatest challenges to productivity as a developer? Select up to 3:
WorkRemote	How often do you work remotely?
WorkLoc	Where would you prefer to work?
ImpSyn	For the specific work you do, and the years of experience you have, how do you rate your own level of competence?
CodeRev	Do you review code as part of your work?
CodeRevHrs	On average, how many hours per week do you spend on code review?
UnitTests	Does your company regularly employ unit tests in the development of their products?
PurchaseHow	How does your company make decisions about purchasing new technology (cloud, AI, IoT, databases)?
PurchaseWhat	What level of influence do you, personally, have over new technology purchases at your organization?

Column Name	Question Text
LanguageWorkedWith	Which of the following programming, scripting, and markup languages have you done extensive development work in over the past year, and which do you want to work in over the next year? (If you both worked with the language and want to continue to do so, please check both boxes in that row.)
LanguageDesireNextYear	Which of the following programming, scripting, and markup languages have you done extensive development work in over the past year, and which do you want to work in over the next year? (If you both worked with the language and want to continue to do so, please check both boxes in that row.)
DatabaseWorkedWith	Which of the following database environments have you done extensive development work in over the past year, and which do you want to work in over the next year? (If you both worked with the database and want to continue to do so, please check both boxes in that row.)
DatabaseDesireNextYear	Which of the following database environments have you done extensive development work in over the past year, and which do you want to work in over the next year? (If you both worked with the database and want to continue to do so, please check both boxes in that row.)
PlatformWorkedWith	Which of the following platforms have you done extensive development work for over the past year? (If you both developed for the platform and want to continue to do so, please check both boxes in that row.)
PlatformDesireNextYear	Which of the following platforms have you done extensive development work for over the past year? (If you both developed for the platform and want to continue to do so, please check both boxes in that row.)
WebFrameWorkedWith	Which of the following web frameworks have you done extensive development work in over the past year, and which do you want to work in over the next year? (If you both worked with the framework and want to continue to do so, please check both boxes in that row.)
WebFrameDesireNextYear	Which of the following web frameworks have you done extensive development work in over the past year, and which do you want to work in over the next year? (If you both worked with the framework and want to continue to do so, please check both boxes in that row.)
MiscTechWorkedWith	Which of the following other frameworks, libraries, and tools have you done extensive development work in over the past year, and which do you want to work in over the next year? (If you both worked with the technology and want to continue to do so, please check both boxes in that row.)
MiscTechDesireNextYear	Which of the following other frameworks, libraries, and tools have you done extensive development work in over the past year, and which do you want to work in over the next year? (If you both worked with the technology and want to continue to do so, please check both boxes in that row.)
DevEnviron	Which development environment(s) do you use regularly? Please check all that apply.
OpSys	What is the primary operating system in which you work?
Containers	How do you use containers (Docker, Open Container Initiative (OCI), etc.)?
BlockchainOrg	How is your organization thinking about or implementing blockchain technology?
BlockchainIs	Blockchain / cryptocurrency technology is primarily:
BetterLife	Do you think people born today will have a better life than their parents?
ITperson	Are you the "IT support person" for your family?
OffOn	Have you tried turning it off and on again?
SocialMedia	What social media site do you use the most?
Extraversion	Do you prefer online chat or IRL conversations?
ScreenName	What do you call it?

Column Name	Question Text
SOVisit1st	To the best of your memory, when did you first visit Stack Overflow?
SOVisitFreq	How frequently would you say you visit Stack Overflow?
SOVisitTo	I visit Stack Overflow to... (check all that apply)
SOFindAnswer	On average, how many times a week do you find (and use) an answer on Stack Overflow?
SOTimeSaved	Think back to the last time you solved a coding problem using Stack Overflow, as well as the last time you solved a problem using a different resource. Which was faster?
SOHowMuchTime	About how much time did you save? If you're not sure, please use your best estimate.
SOAccount	Do you have a Stack Overflow account?
SOPartFreq	How frequently would you say you participate in Q&A on Stack Overflow? By participate we mean ask, answer, vote for, or comment on questions.
SOJobs	Have you ever used or visited Stack Overflow Jobs?
EntTeams	Have you ever used Stack Overflow for Enterprise or Stack Overflow for Teams?
SOComm	Do you consider yourself a member of the Stack Overflow community?
WelcomeChange	Compared to last year, how welcome do you feel on Stack Overflow?
SONewContent	Would you like to see any of the following on Stack Overflow? Check all that apply.
Age	What is your age (in years)? If you prefer not to answer, you may leave this question blank.
Gender	Which of the following do you currently identify as? Please select all that apply. If you prefer not to answer, you may leave this question blank.
Trans	Do you identify as transgender?
Sexuality	Which of the following do you currently identify as? Please select all that apply. If you prefer not to answer, you may leave this question blank.
Ethnicity	Which of the following do you identify as? Please check all that apply. If you prefer not to answer, you may leave this question blank.
Dependents	Do you have any dependents (e.g., children, elders, or others) that you care for?
SurveyLength	How do you feel about the length of the survey this year?
SurveyEase	How easy or difficult was this survey to complete?